

JAPANESE
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STANDARD

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JIS B 0005-2 : 1999

(ISO 8826-2 : 1994)

**Technical drawings—
Rolling bearings—
Part 2 : Detailed simplified
representation**

ICS 01.100.20; 21.100.20

Descriptors : technical drawing, engineering drawings, rolling bearings, bearings

Reference number : JIS B 0005-2 : 1999 (E)

B 0005-2 : 1999 (ISO 8826-2 : 1994)

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently **JIS B 0005 : 1973** is withdrawn and replaced with **JIS B 0005-1 : 1999** and **JIS B 0005-2 : 1999**.

JIS B 0005 *Technical drawings—Rolling bearings* consists of following two parts:

- Part 1 : *General simplified representation*
- Part 2 : *Detailed simplified representation*

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In the event of any doubts arising as to the contents,
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Technical drawings — Rolling bearings — Part 2 : Detailed simplified representation

Introduction This Japanese Industrial Standard has been prepared based on the first edition issued in 1994 of **ISO 8826-2**, *Technical drawings — Rolling bearings — Part 2 : Detailed simplified representation* without changing the technical contents.

The principle of drawing practice is to depict the object to scale using lines. In simplified representations, only essential features are shown, preferably in outline (in order to save time and effort).

The degree of simplification depends on the kind of object represented, the scale of the drawing and the purpose of the documentation. This means that either a general simplified representation (**Part 1**) or a detailed simplified representation (**Part 2**) may be used. A detailed simplified representation shows more details of a rolling bearing, for example the number of rows or the possibility of alignment.

In order to avoid misunderstandings, only one kind of simplification, either the general or the detailed simplified representation, shall be used on a drawing.

The description underlined with a dotted line in this Standard is not included in the original International Standard.

1 Scope This Standard specifies a detailed simplified representation for various rolling bearings. This representation should be used in cases where it is not necessary to show the exact shape and details of the rolling bearings, for example in assembly drawings.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards indicated below shall be applied.

JIS B 0005-1 *Technical drawings — Rolling bearings — Part 1 : General simplified representation*

JIS B 1512 *Rolling bearings — Boundary dimensions*

Remarks: The provisions cited from the following standards are equivalent to the relevant provisions in this Standard.

ISO 15 : 1981 *Rolling bearings — Radial bearings — Boundary dimensions, general plan*

ISO 104 : 1979 *Rolling bearings — Thrust bearings — Boundary dimensions, general plan*

ISO 355 : 1979 *Rolling bearings — Metric tapered roller bearings — Boundary dimensions and series designations*

ISO 355-1 : 1980 *Metric tapered roller bearings — Double row bearings — Boundary dimensions*

ISO 3030 : 1996 *Rolling bearings — Radial needle roller and cage assemblies — Dimensions and tolerances*

ISO 3031 : 1979 *Needle roller bearings — Thrust needle roller and cage assemblies, thrust washers — Dimensions and tolerances*

ISO 3245 : 1997 *Rolling bearings — Needle roller bearings, drawn cup without inner rings — Boundary dimensions and tolerances*

ISO 8443 : 1985 *Radial ball bearings with flanged outer ring — Flange dimensions*

JIS B 1536 *Rolling bearings — Needle roller bearings — Dimensions and tolerances*

Remarks: The provisions cited from **ISO 1206 : 1982**, *Needle roller bearings — Light and medium series — Dimensions and tolerances* are equivalent to the relevant provisions in this Standard.

JIS B 1558 *Rolling bearings — Insert bearings*

Remarks: The provisions cited from **ISO 9628 : 1992**, *Rolling bearings — Insert bearings and eccentric locking collars* are equivalent to the relevant provisions in this Standard.

3 Method of representation

3.1 General rules The space on a drawing where a rolling bearing is located shall be circumscribed by means of a square or rectangle (even if there is no inner or outer ring respectively) (see **JIS B 0005-1**).

3.2 Elements of detailed simplified representation for rolling bearings The elements of detailed simplified representation for rolling bearings are given in Table 1.

Examples of combinations of bearing features according to Table 1 and load-bearing characteristics are given in Table 2.

In representations perpendicular to the bearing axis, the rolling element may be shown as a circle, regardless of its actual shape (ball, roller, needle, etc.) and size (see Fig. 1).

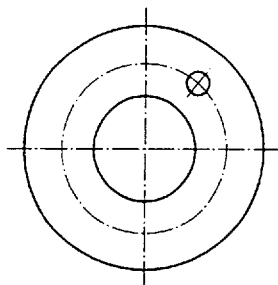


Fig. 1

3.3 Detailed simplified representation The detailed simplified representation of rolling bearings is shown in Table 3 to Table 6.

Roller bearings shown in Table 3 to Table 5 are always depicted in the space above the horizontal axis of the bearing, while Table 6 refers to the vertical axis of the bearing.

**Table 1 Elements of detailed simplified representation
for rolling bearing features**

No.	Element	Description	Application
1.1	 ⁽¹⁾	Long continuous straight line ⁽³⁾	Line representing the axis of the rolling element, without possibility of alignment
1.2	 ⁽¹⁾	Long continuous arc of circle ⁽³⁾	Line representing the axis of the rolling element with possibility of alignment or the alignment ring washer.
1.3	 Alternative indication (examples)  ⁽²⁾ circle  ⁽²⁾ wide rectangle  ⁽²⁾ narrow rectangle	Short continuous straight line ⁽³⁾ , crossing the long continuous line No. 1.1 or 1.2 at 90 ° and coincident with the radial centreline of each rolling element. circle wide rectangle narrow rectangle	Number of rows and position of the rolling elements ball roller needle-roller, pin

Notes ⁽¹⁾ This element may be shown inclined, depending on the type of the bearing.

⁽²⁾ Instead of the short continuous straight line, this variation may be used to represent the rolling element.

⁽³⁾ The width of line is the same as that of contour lines.